

SECTION 4

PROPOSED ENVIRONMENT

This section is intended to provide interested parties an overview of the proposed telecommunications environment envisioned by the Department of General Services, Telecommunications Division (DGS/TD). Please review the proposed environment and identify any alternatives or exceptions the State should consider.

By providing detailed information and asking a variety of questions in this RFI, the State hopes to communicate the complexity and diversity of the telecommunications needs of its customers, and in turn, receive more useful ideas and responses.

4.1. CALNET Vision

The State of California is responsible to oversee statewide telecommunication services and network deployments, to develop standards and requirements, and to acquire through effective frameworks, the best overall telecommunications and network services to meet the business needs of State and local government customers.

State agencies under the Executive Branch are required to utilize the CALNET master contract. Local government agencies (tax supported and non-profit, or joint powers agencies) and exempt State agencies, are not required to utilize CALNET, but many do so. All of these groups are considered to be important in the success and implementation of the CALNET MSA.

The DGS/TD finds its main statutory authority in Government Code (GC) 15275-15279. Refer also to www.dgs.ca.gov/td at Network Services, Law and Policies Quick Links for additional information on State Telecommunications Strategies and Policies. Additional information on the State RFP vision/expectations is contained in Section 5.

The CALNET vision is:

- Owning and operating wide area networks (WANs) are neither core competencies nor core responsibilities of the State; thus, the State's telecommunications network(s) will continue to be procured from, and operated by, private contractor(s) under the oversight of DGS/TD.
- The State envisions a consolidated, flexible, responsive, secure, survivable, efficient and cost-effective telecommunications infrastructure that provides seamless end-to-end interoperability for voice, data and video services, whether separately or as part of a converged service.
- Where feasible, multiple contractors should provide increased diversity and competition that would lead to lower overall prices statewide, more product and service choices, and the capability to obtain and rapidly deploy new technologies.

- State acquisition processes and requirements should allow for flexibility, and for refreshing or adding new technology through the life of the contract.

4.2. Overview Of Proposed State Environment

The solutions offered should continue to address the wide variety of State and local government business requirements in the context of the State vision as outlined in this RFI. They should also provide for continuous modernization of the infrastructure and rapid deployment of new technologies to meet the State's ever-increasing telecommunications demands.

The State acknowledges there are multiple options to achieve its objectives and expects the contractor community to be innovative in proposed solutions and recommendations.

Considering both state and local government telecommunications business needs, the State will continue to:

- 1) Develop and implement strategies and policies that will satisfy the State vision, including taking advantage of technology improvements (i.e. refreshing of technology, and convergence of voice, video and data networks and applications);
- 2) Promote more diverse and cost effective product and service choices through policy and acquisition strategies that encourage vendor competition and reduced prices for new and existing services and technologies; and pursue other factors or actions that will help meet State or customer business needs;
- 3) Obtain economies of scale through the State's leveraged buying power, require pricing strategies that benefit the State as a whole, provide for Service Level Agreements (SLAs) that are industry standard or better, and pursue other related efficiencies and protections.
- 4) Maintain the ability to substitute or discontinue ("off-ramp") contracted services that do not meet customer needs and/or contract requirements under prescribed circumstances.

4.2.1. Major Objectives

Listed below are the major objectives the State wishes to achieve through a competitively obtained statewide contract(s).

- Cost effective, appropriate, and secure telecommunications products and services for State and local government agencies as provided for by the State vision, strategies and policies.
- Consolidation of the State's telecommunications buying power through standard statewide pricing (with provisions for contractors to offer lower prices on an individual case basis when appropriate).

- No cost to existing customers to migrate to replacement services; each contractor must plan and communicate how this migration would be accomplished in the least disruptive way.
- Partnering with the contractor(s) to manage, deploy and implement services and sophisticated network monitoring capabilities, applicable reports and customer training.
- Ongoing and periodic in-depth reviews of service maintenance and provisioning strategies in the best interest of the customer, including the ability to manage, track and report on large projects, and to make adjustments in contractor pricing.
- Assessment of penalties for failure to meet contract terms and conditions, and other designated rights and remedies for the State, with the ability to discontinue or substitute services as determined by DGS/TD, with customer and contractor input.

4.2.2. *DGS/TD Oversight*

The DGS/TD will:

- Exercise statewide management and oversight of contract utilization and deployment, including contractor provisioning and maintenance of products and services.
- Perform a strong customer advocate role to ensure the contractors continuously provide responsive service to customers.
- Provide centralized contract management and oversight to monitor adherence to terms and conditions by the contractors, and to validate cost effectiveness of the contract(s).

4.3. Required Network Services

The State has requirements for a broad range of voice network, line side, data, video and other telecommunications services. DGS/TD requires the contractor(s) at a minimum, to provide the services described in Section 3, and as outlined below, as part of the initial conversion process.

The following are representative of the types of telecommunications services required, but may not be all-inclusive.

4.3.1. *Voice Network Services*

Section 3 defined the existing voice network services offered by contract to DGS/TD. At a minimum, DGS/TD is seeking the same range and level of service as well as the services described below.

4.3.1.1. Local Calling

The State is seeking Local usage service – Local, Zone 3 and Local Toll - throughout California. If statewide local service is not feasible, the State may wish to contract with ILECs on an individual basis.

4.3.1.2. Long Distance Calling

The Long Distance services should consist of InterLATA IntraState, InterState, and International calling. The service should be engineered to accommodate all minutes of usage required by the State.

4.3.1.3. Long Distance Access

The service should provide for switched (Dial 1) via pre-subscription, dedicated (T-1) or other access methods available. The State expects the contractor(s) to work closely with the agencies to determine which method is best for their specific situation. Considerations should include cost benefits, traffic engineering, and analysis of how agencies use the long distance service to serve the public. The State may wish to contract with each ILEC. The service should include a private network dial plan. This dial plan should include both dedicated and switched access calling to dedicated access customers.

4.3.1.3.1. Termination Types

The State expects various types of direct dedicated access arrangements for agency equipment. Some equipment may require analog termination, some may use a direct T-1 digital termination, and others may use a Primary Rate Interface (PRI) termination. The contractor(s) should offer all of these and be prepared to offer others as the technology changes and new standards are introduced.

4.3.1.4. Disaster Readiness

The State expects a Disaster Readiness service in the form of planning, recovery services, on-net calling via private backbone network, coordination of the relocation of services, referrals, voice mail for emergency broadcast/announcement and service restoration.

4.3.1.5. Advanced Intelligent Network Services

The State expects Advanced Intelligent Network (AIN) services for State use comparable to, or better than, the description in

Telcordia Technologies literature; Telecordia FR-15, second edition dated 1/1/2002.

4.3.1.6. Enhanced Toll Free Services

The State expects an Enhanced Toll Free service that provides statewide Toll Free calling services. Termination types should include switched (business line), switched WATS (WAL), dedicated (DAL), including analog and T-1 termination and any others that are available. The terminating Toll Free services should provide, at a minimum, routing based on originating location (telephone number), day, and time of day.

4.3.1.7. 800 Enhanced Call Routing (ECR)

The State expects a voice network product that routes calls to customer locations based on network-provided data such as Dialed Number Identification Service (DNIS), Automatic Number Identification (ANI), or caller-input Dual Tone Multi-Frequency (DTMF) telephone keypad entries. Database routing will be based on, but not limited to, the following criteria:

- Dialed number
- Automatic Number Identification (ANI)
- Location of caller
- Caller entered digits
- Time of day, day of week

Advanced 800 features should be used to selectively route calls to the platform or to the final customer destination.

4.3.1.8. International Toll Free (800)

This service should allow for a Toll Free call origination in another country to complete to a U.S. destination. It should also allow outbound 800 terminating services to overseas locations as part of correspondent administrations incoming international service.

4.3.1.9. 900 Services

The State anticipates a 900-type service for agency use. This service should provide passive or interactive information to callers on a “pay as you go” basis. The service should be comprised of two components: Customers may sign up for “Transmission” and “Billing and Collection”(B&C) or “Transmission Only” service offerings.

The States expects 900 blocking services.

4.3.1.10. Long Distance Call Overflow (Network Call Redirect)

The State expects a Long Distance call overflow product that allows customers to complete calls that would normally go unanswered because of busies, ring no answers, or other customer specific reasons. As an overflow product, would allow calls that have been rejected at one location (e.g., busy signal) to be re-routed to another pre-defined location so the call can be answered. Alternate destinations may be network announcements, domestic or international locations. Network managers require an unlimited number of choices of why, where, and how to overflow calls based on Trunk Group, Type of Service (both inbound and outbound), or individual Toll Free/VNet number.

Network call overflow should be used with the long distance voice network and Enhanced Toll Free services. It should include two product offerings: Outbound services and Inbound services, and should be available to Integrated Services Digital Network (ISDN) as well as non-ISDN access facilities.

4.3.1.11. Operator Services

4.3.1.11.1. Operator Services – IntraLATA

Operator service calls should be available throughout California's local LATAs. Local operator services should provide general assistance to callers and offer the caller alternatives for billing calls for premise owner telephones.

4.3.1.11.2. Operator Services – Long Distance

Long Distance operator services should provide general assistance to callers and offer the caller alternatives for billing Long Distance calls for premise owner telephones. Callers, using Operator service, should always get general assistance and help completing calls and arranging alternate billing options for Long Distance or International calling.

Automatic Number Identification (ANI) screening should be in use to inform operator of a caller's telephone number. The telephone number should be cross-referenced with an ANI database allowing special features and restricting certain types of calls, e.g., charging a call to a payphone.

4.3.1.12. Calling Card and Prepaid Calling Card

Calling Card services should allow customer agency staff to dial a Toll Free number for accessing the Calling Card service, entering an authorization number and placing a Calling Card type call from

anywhere within the world where service agreements exist between the U.S. and the foreign countries for telephone service.

The State also expects a Prepaid Calling Card service. This telephone Calling Card is paid for in advance, and the value is predetermined and printed on the card. The balance is reduced each time the user makes a call. Once the value of the card has been depleted, the card can either be discarded or recharged to add additional calling time. The Prepaid Card should be capable of being used for both domestic and international termination and to originate calls from an expanding number of countries.

The following calling card features are also expected:

- Magnetic strip for authorization information.
- Customized Logo Cards for each requesting agency.
- Restricted cards limiting access by terminating location, day, time of day, or user defined permitted calls depending on user requirements.
- Ability to place multiple calls without reentering an authorization number.

4.3.1.13. Audio Conferencing

The State anticipates Audio Teleconferencing. Basic Audio Conferencing on Local Consolidated services should be provided as a standard feature. These should consist of three-way conferencing, six-port conferencing, 30-port meet-me conference-bridge, and preset conferencing up to 25 designated conferees.

For those users with specific needs not met by standard conferencing, the contractor(s) should offer additional conferencing options such as:

- Operator dialed -- A specialist calls each participant prior to the start of the teleconference.
- Dial-in -- Also known as “Meet-Me” service, participants (up to 90) dial a pre-established number to join the conference call.
- Mixed mode -- This feature combines operator dialed and dial-in options to meet individual needs.
- Broadcast -- Participants are in a listen-only mode.
- Roll call -- Establishes who is present on the call.
- Recording -- Provides a record of the teleconference on audiocassette.

- Transcription -- Provides a written document of the recorded teleconference.
- Translation service -- Provides an on-line translator.
- Security ID -- Participants use a security code to prevent unauthorized participation in teleconference.

4.3.1.14. Intelligent Call Routing

The State expects Intelligent Call Routing functionality. This is a network solution that provides call-by-call routing of Toll Free calls to multiple, geographically dispersed ACD groups to create a virtual call center network for load balancing and maximizing use of available agents. The service routes calls and consolidates management information at the network level, thus creating enterprise-wide call distribution capabilities. The service offers features such as:

- **Pre and Post Call Routing** - Routing intelligence that is applied before the call is sent to the destination is referred to as pre-routing. Intelligent transferring between agent groups or into or out of VRUs is referred to as post call routing.
- **Skills Based Routing** - Ability to route calls to a particular ACD group or agent based on predefined skill sets required to handle incoming call.
- **Additional Routing Based On:**
 - Dialed number
 - Automatic Number Identification (ANI)
 - Location of caller
 - Caller entered digits
 - Time of day, day of week
 - Cost of call

4.3.1.15. Network Automatic Call Distributor

The State anticipates Network Automatic Call Distributor (NACD) functionality. Residing on the contractor's platform, NACD should provide Central Office based equitable call distribution and queuing functions for call centers. NACD should enable an ACD customer with multiple call center sites served by one or more Central Offices to have their sites tied together via the local loop and inter-office SS7 network to create one "virtual" ACD. NACD

should extend the capabilities of basic ACD in that it should allow several ACD groups to answer calls as though the groups were one large group. The NACD agents would typically use regular Electronic Business Sets (see Equipment, Electronic Business Sets). The NACD functionality should be available across LATA boundaries.

4.3.1.16. Customized Intelligent Call Routing

Customized Intelligent Call Routing should be developed within the scope of the contractor(s)'s ICR product as an Enhanced Network Call Center design option and should be available to any governmental agency that expects Virtual Network Call Center based call distribution, which may include, but is not limited to, the following components/products.

- Enhanced 800 Toll Free service
- Central Office based Centrex and ACD service
- ICR applications development and support
- IVR applications development
- CTI applications development and support
- LAN/WAN Maintenance
- Operational Support Systems:
 - Customized Provisioning System
 - Customized Billing and Account Management
 - Consolidated MIS reporting with integrated near real time and historical call center and network management reporting for a true enterprise view and optimization.

4.3.1.17. Voice Over Internet Protocol (VOIP)

The State anticipates that in the near future some agencies may be interested in the development of Voice Over Internet Protocol (VOIP) technology; however, it is not yet known what specific applications or services will be required on a statewide basis.

4.3.2. *Line Side Services*

The State expects Line Side telephone services, also referred to as Custom Local Area Signaling Service (CLASS 5) services, on a statewide basis to be jointly used by multiple agencies. The services should include Basic Business, Enhanced Business or Centrex, and ISDN line services as standard offerings.

DGS/TD is seeking solutions that provide the least cost to the State while providing government users with the greatest feature flexibility. The contractor(s) should provide a flexible pricing option for services to allow users the choice of low cost basic services or more sophisticated feature rich services.

4.3.2.1. Business Line Service

The State expects the use of Measured Business Lines throughout California, including ISDN – Basic Rate Interface (BRI) and other Business Line types that offer value added benefits to agencies. The State anticipates the contractor to offer optional features to the lines such as the CLASS feature options, Call Waiting, Call Forwarding, Call Screen, Call Return, Call Trace, Caller ID, Account Codes, Remote Office/User Access options, etc.

The Business Line services may be offered as part of the agencies consolidated services within the geographically designated locations throughout the State or, as a single agency service application as required to meet the agency's business needs.

4.3.2.2. Consolidated Services Locations

The State expects consolidated services locations for customers that are located in a common geographical area and have a need for common service. The State expects optional features to be offered either in bundled feature packages, or as separate individual features.

In areas where DGS/TD manages the contractor supplied consolidated service, the contractor would be expected to provide similar services. The State expects enhanced network service capability between statewide-consolidated locations, which establish cost effective service provisioning. An example of a large consolidated DGS/TD managed Centrex, is the Sacramento metropolitan citywide Centrex. The State expects a service that minimizes the cost for calling between State users within the same community. The service should also provide a suite of products and features equivalent to those available on existing Centrex or CentraNet locations. Some products and features that are expected are:

- Basic and Enhanced Centrex or equivalent services.
 - Analog (Basic)
 - Digital (Centrex-IS or equivalent)
 - IP (Internet Protocol)
- Automatic Call Distributor (ACD or equivalent)

- Network ACD or equivalent capabilities
- Local and Network Management Information Services
- Local and Network Announcements and Music in Queue capabilities
- Local and Network Computer Telephony Integration (CTI) capabilities
- Audio Conferencing, Video Conferencing, and /or IP Net Conferencing
- Mechanized, User controlled, Service Management Systems.

4.3.2.3. Non-Consolidated Service Locations

For those locations that do not qualify as State consolidated service locations, the State expects standard Line Side products and features that are available to governmental agencies statewide. In addition to the standard Business Lines and features, Centrex/CentraNet type lines and features, the State expects ISDN-Basic Rate Interface (BRI), Voice Processing services, Account Codes, Automatic Call Distributor (ACD) or, Network ACD interface applications, local and or network ACD/Management Information System, Music or Announcement in Queue, CLASS features, Computer Telephony Interface (CompuCALL), statewide Centrex type features, Video Conferencing dial up, remote user access and automated user controlled management applications.

4.3.2.4. Private Branch Exchange Trunks

The State anticipates trunk service to customer Private Branch Exchanges (PBXs) or Customer Premise Equipment (CPE) based on accepted industry standards.

4.3.2.5. Voice Processing Services

The State expects Voice Processing services on a statewide basis. The level of service may vary according to the quantity of potential users in a particular location. It is expected that in Consolidated locations the following minimum set of services will be provided:

- **Voice Mail** - The capability for users to have callers leave a message to be retrieved at a later time. The user may also send messages to other users of the Voice Mail system. The user may reply to messages in their Voice Mail system from users in other Voice Mail systems without incurring message or return call charges. The service should offer a variety of message length capabilities, greeting and delivery options,

broadcast messaging, ability to revert to an attendant and out calling for paging.

- **Interactive Voice Response** - A Voice Processing application that gives callers specific information or accepts an order based on specific information input by callers using speech recognition or from their touchtone telephone. Some examples would be a highway traffic condition query or Consolidated Network Call Center application.
- **Automated Attendant** - A service that automatically answers incoming calls within a predefined number of rings, without assistance from a live attendant. It then allows callers to reach an extension by prompting the caller to enter the extension number or name, or offers other services, such as announcements for voice menu choices. An Automated Attendant can process multiple calls simultaneously. It prompts callers with a series of choices and actions to perform. Based on selected action, the caller may listen to a recorded announcement, leave a message, place a call, activate another voice service or be routed to a particular service.
- **Voice Forms** - Applications that allow business users to collect information from callers over the telephone. A series of questions is played to a caller who responds to each question in sequential order. Once the information is collected, it can be retrieved and transcribed to suit individual requirements.
- **Fax on Demand or Fax Reply** - A multimedia option, which allows the user to create and retrieve Fax information by selecting Fax items from a voice menu. Fax information can be sent to the caller on the same call or the caller is prompted for a callback number to which the Fax can be sent after the call has been disconnected.

4.3.2.6. Call Center Services

The State expects the following call center applications:

4.3.2.6.1. Automatic Call Distribution

This service enables agencies to efficiently handle large volumes of incoming calls by distributing them equitably through station lines to a designated group of answering positions or agents.

A variety of standard and optional Automatic Call Distribution (ACD) group, agent and supervisor features should be available to meet the specific needs of the individual call center. An electronic business or agent set

is generally required to access ACD features. Network based ACD allows an agency to distribute calls to multiple ACD agent groups in multiple locations within California.

4.3.2.6.2. Announcements/Music in Queue

The service offers standard and/or customized announcements to be heard by callers at predefined intervals while calls are in queue. The system also offers an option for music to be played before, after, or in lieu of announcements.

4.3.2.6.3. Management Information System (MIS)

Management Information System (MIS) service provides real-time ACD monitoring and comprehensive historical reporting for active call centers. It provides up-to-the-minute call center performance evaluation data and historical reporting for in-depth analysis of the call center's overall performance and for projecting future trends. The statistics allow the manager to monitor changing ACD traffic loads and levels of service and make adjustments to various ACD group and agent parameters using a management terminal.

4.3.2.6.4. Computer Telephony Interface (CTI) Service

The contractor is expected to include a computer telephony interface, which utilizes the Switch Computer Application Interface (SCAI) open architecture standard to connect the Central Office switch with the customers' general-purpose business computers for the exchange of information to enhance call processing. This feature functionality does not work independently, but is highly dependent upon the customer's business application software. Representative CTI applications are:

- **Coordinated Voice and Data** – Provides an agent a screen of information about a caller concurrently with receipt of call.
- **Voice Processing Integration** - Uses Interactive Voice Response (IVR) systems and Voice Response Units (VRU) to obtain additional information about callers and direct them to the appropriate agent.
- **Third Party Control** - Allows agents to control calls, such as holding, consulting, transferring, and conferencing all through their computer keyboard commands.

4.3.3. Data Services

The State requires, at a minimum, the same level of data services as presently offered (see Section 3), a consolidated structure that can serve many organizations with diverse missions and keep up with the growing demand for bandwidth, the launch of new applications, and the introduction of new technologies.

The State anticipates the support of open architecture standards and interfaces, that provides for multiple levels of service availability ranging from twenty-four hours a day, seven days a week, to the standard 8:00 a.m. to 5:00 p.m., Monday - Friday service availability.

Existing Data services that are expected to require continued support are listed below.

4.3.3.1. Dedicated Services

4.3.3.1.1. Analog Service

The State expects a voice grade 2-wire or 4-wire, half or full duplex transmission service that supports point-to-point or multi-drop applications.

4.3.3.1.2. DS0 Service

The State expects point-to-point digital Data circuits. DS0 service supports multipoint/multi-drop digital Data circuits (DSU driven) up to 56 Kbps. Digital multipoint services will support multipoint data applications with DS0 access, and/or T1 local access.

4.3.3.1.3. DS1 Service

The State expects dedicated point-to-point private digital, Special Access services providing non-switched, dedicated point-to-point circuits used for both Voice and Data communications. DS1 can be provisioned on fiber, copper or mixed media. The minimum types of line are required in the following two formats:

- Basic (full 1.544 Mbps)
- Channelized (multiplexed DSO channels — 64 Kbps each)

4.3.3.1.4. DS3 Service

The State expects point-to-point, full duplex, DS3 digital private line service, which currently operates at 44.736 Mbps. DS3s may be clear-channel or channelized into 28

DS1s by way of multiplexing equipment at a servicing wire center or hub wire center. DS3 service should be available in multiples of three circuits, ordered concurrently, that can be point to point or connected at the wire center serving the DS3X3 premises to 3 separate terminating DS3 locations.

DS3 networks should have the ability to be reconfigured by customer-initiated changes in the individual circuit segments of a DS3 network and may be mapped and stored, and executed automatically, based on the time of day, or on demand, based on disaster recovery or traffic smoothing requirements.

4.3.3.1.5. Optical Carrier Service (OC-X)

The State expects at a minimum, OC1, OC3, OC3-c (Concatenated), OC12, OC48, and OC192 services. The service provided over Synchronous Optical Network (SONET) should have built-in redundancies and diversity in all network components, as well as advanced network management and maintenance capabilities. The State expects additional bandwidth offerings and enhanced features.

4.3.3.1.6. Gigabit Ethernet Metropolitan Area Network

The State expects the delivery of gigabit Ethernet network services, an intraLATA dedicated high capacity channel. The service should provide for the transmission of digital signals at gigabit speeds in Ethernet format. At a minimum, the service should be available in point-to-point (node-to-node) configurations, enabling customers to connect two or more Local Area Networks (LANs) at the native speed of the LAN backbone within the same LATA. The gigabit Ethernet network should link without signal loss between locations at current maximum distances of 31 miles or more.

4.3.3.2. Extended Dedicated Services

The State anticipates extended dedicated services when appropriate for interstate connectivity.

4.3.3.3. Synchronous Optical Network Ring and Access Services

The State expects Synchronous Optical Network (SONET) Ring and Access Services for high bandwidth (T1 and higher) communication paths on dedicated, bi-directional, self-healing

rings or as point-to-point network configurations connecting customer premises.

The minimum current services, enhanced capacity, and configuration options to extended locations shall be supported.

4.3.3.4. ISDN Basic Rate Interface

The State expects the support of an integrated voice, data, and video transmission utilizing ISDN BRI.

4.3.3.5. Primary Rate ISDN

The State expects a Primary Rate Integrated Services Digital Network (ISDN) through standard T1 (1.544 Mbps) point-to-point private-line facilities.

At a minimum, Primary Rate Interface (PRI) should be offered in 3 different configurations:

- 1:23 B Channels + 1 Primary D Channel
- 2:24 B Channels
- 3:23 B Channels + 1 Backup D Channel

4.3.3.6. Switched 56

The State expects a dial-up switched digital service offering agencies both narrowband services (increments of 56/64 Kbps) and wideband services with increments of 128 Kbps up to 1.544 Mbps at a minimum.

4.3.3.7. Virtual Point of Presence – Dial Access Service (VPOP-DAS)

The State expects a Dial Access Service providing dial-up access via virtual networking over Frame Relay or Cell Relay network.

At a minimum, the Dial Access Service should consist of a modem port (which supports ISDN and V.90 and Radius authentication), a telephone number local to each coverage area, a single Frame Relay port and connection per LATA, and a customer network management web-based tool to pull reports at will on network performance.

4.3.3.8. Frame Relay Service and Asynchronous Transfer Mode Data Services

The State expects the support of Frame Relay and Asynchronous Transfer Mode (ATM).

4.3.3.9. InterLATA Frame Relay and Asynchronous Transfer Mode Data Services

The State anticipates this service to provide connections from Frame Relay and ATM Data services that are originating and terminating in different LATAs within the State of California.

4.3.3.10. Extended Frame Relay

The State expects Extended Frame Relay services for Interstate Frame Relay.

4.3.3.11. Managed Frame Relay

The State expects Managed Frame Service (MFS) to provide an integrated multi-contractor, single point-of-contact service for network design, implementation, installation, network management, and performance monitoring.

Managed Frame Relay should include at a minimum the features included in Section 3.

4.3.3.12. Managed Extended Frame Relay

The State expects Managed Frame Relay service for Interstate Extended Frame Relay service.

4.3.3.13. Virtual Private Network

The State expects a suite of VPN services equivalent to, or greater than, those included in Section 3.

4.3.3.14. Extended ATM

The State expects Extended ATM services for Interstate ATM applications.

- DS-1 (1.44 Mbps)
- nxDS-1 (1.544 Mbps)
- DS-3 (45 Mbps)
- OC-3 (155 Mbps)

4.3.3.15. Digital Subscriber Line

The State expects Digital Subscriber Line (DSL) service. The State expects, at a minimum, the following:

- Asymmetrical with 128Kbps up and 384 Kbps down.

- Asymmetrical with 1.544 Mbps downstream and 384 Kbps upstream.
- Symmetrical at 384 Kbps.

4.3.3.16. Video Conferencing Services

Video conferencing should be available to meet the various needs of customers. This includes switched services or dedicated video conferencing. Services should be flexible to allow connections to other video conferencing networks outside of the contractor's service.

The State anticipates multiple simultaneous connections on a bridge and the necessary protocol conversions for connecting dissimilar equipment. Both H.320 and IP protocols should be supported.

4.3.3.17. Security Standards

The State expects stringent security standards, based upon the transmission of confidential or sensitive data. Most security requirements are based on the potential for fraud or disruption of State services if either a physical network or transmitted data were compromised. Standards are expected to be current state-of-the-art, applicable to eventual proposed solutions, and to be updated at a minimum, in line with the industry.

4.3.3.18. Disaster Recovery and Emergency Operations

Public safety agencies, major data centers, agencies with supporting roles during disaster or emergency operations, and agencies with significant roles in post-disaster recovery have mission-critical needs to maintain network availability during disasters or emergencies. At minimum, the State expects the contractor(s) to comply with existing State operations and regulatory requirements as required by law.

4.3.3.19. Fault Recovery

Full redundancy, rapid failure detection, and rapid recovery are essential for all agencies. Full redundancy and guaranteed 7 X 24 operation is required by some agencies. Requirements for fault detection, recovery and for network availability vary throughout the agencies. Technologies should at a minimum, be supported to the highest level of fault recovery currently benchmarked by industry standards.

The contractor is expected to work with DGS/TD to establish network failure notification criteria. DGS/TD would expect access to a workstation, phone, and dial connection at the contractors Network Operations Center for the purpose of oversight at no charge to the State.

4.3.3.20. Customer Service

The State expects a 7 X 24 help desk staffed by concerned and qualified personnel. Other expected customer services include:

- Support for a full range of transport services
- Support for a full range of service classes
- Support for a full-range of access speeds
- Option to monitor routers, CSUs/DSUs
- Option for full-service router consulting at a fixed fee
- Option for turn-key interconnection services
- Available consulting and network planning services
- Trouble call tracking with rapid resolution and confirmation call to customer

4.3.3.21. Public Access and Electronic Provision of Service

The State expects publicly accessible Web servers, or Internet access for authorized employees to provide public services electronically – but on a separate network from the State’s internal network.

4.3.4. Other Services

The State expects simple wiring services in all State agency office buildings. Customers requesting additions or changes to local service, should have the option to use the contractor to install any necessary building wiring, to prepare, program and connect any telephone instrument, and to test any service.

The State also anticipates complex wiring services for extensive rewiring of buildings supporting all agencies’ growing demand for enhanced information technology infrastructure throughout the State of California. The State anticipates other building wiring support services, such as:

- Installation of building wiring, connecting telephone instruments, and testing network service for moves, additions, or changes

- Extensive building rewiring on a project basis to support the growing demand for enhanced information technology infrastructure
- Construction of Local Area Networks, video distribution, voice, alarm, and control systems
- Installation of backbone and distribution wiring
- Provisioning of links between passive network-enabling devices and equipment housed in technology rooms
- Connection of interfaces to building entrance terminals and common network demarcation points
- Testing, auditing, and documentation of wiring for State buildings
- Extending demarcations from Minimum Point Of Entry (MPOE)

Wiring will be installed according to industry standards and cabling recommendations published in the STMM Facilities Management Chapter 0602.0 Uniform Building Cabling/Wiring using fiber, shielded and unshielded twisted pair, and coaxial. The following is a minimum list of applicable standards for State telecommunications installations.

- EIA/TIA 568-B Telecommunications Wiring for Commercial Buildings
- EIA/TIA 569-A Standard for Telecommunications Pathways and Spaces
- EIA/TIA 570 Residential and Light Commercial Telecomm Wiring Standards
- EIA/TIA 606 Admin. Standard for the Telecomm Infrastructure in Buildings
- EIA/TIA 607 Grounding and Bonding of Communication Systems
- EIA/TIA 758 Customer Owned Outside Plant Cabling
- EIA/TIA TSB-67 Transmission Performance Specifications for Field Testing of Twisted-Pair Cabling Systems
- EIA/TIA TSB-72 Centralized Fiber Cabling Guidelines
- EIA/TIA TSB-75 Additional Horizontal Cabling Practice for Open Offices
- TSB-36 Additional Specs for Unshielded Twisted Pair Cables
- TSB-40 Additional Specs for UTP Connecting Hardware

- BICSI Telecommunications Distribution Methods Manual (TDMM)
- ASTM E 814-00 Fire Tests of Through Penetration Fire Stops
- NFPA 221 Standard for Firewalls and Fire Barrier Walls
- National Electric Code (NEC) Sections 250 and 800
- NFPA 780 Standard for the Installation of Lightning Protection
- NFPA 75 Standard for the Protection of Electronic Computer/Data Processing Eq.
- ANSI/IEEE Std 1100 Recommended Practices for Powering and Grounding Sensitive Electronic Equipment in Commercial Power Systems
- Code of Federal Regulations-FCC 47 Part 68- Connection to the PSTN

The State expects a set of standard installation and maintenance intervals for service types.

State-owned building wiring will be made available to contractor(s) to support service and subject to spare capacity

4.3.4.1. DGS Sacramento Fiber Loop Facilities

The State expects comprehensive support and maintenance of the DGS Downtown Fiber Loop that is provided in the current contract.

This should include a 24-hour/7 day (365) maintenance and repair response to all fiber circuit failures (of an emergency nature) on the fiber loop and its associated spurs. Repairs of this nature should be handled by the same trouble reporting and repair desk function that is utilized for all other data circuits. This repair desk function should issue periodic status reports on fiber outages, and provide levels of escalation in the event of major failure.

The State expects the contractor(s) to submit other service intervals, which upon mutual agreement of DGS/TD are suitable for less urgent or routine circumstances.

The State expects that no terms or conditions will be placed on DGS' beneficial use of the fiber loop in lieu of comparable services provided elsewhere in this contract by contractor, nor terms or conditions on expansions, additions or interconnections to the DGS fiber loop. The State expects fiber loop additions or extensions to be added into records for the purposes of providing the maintenance and repair services requested above.

The State expects at least one full time contact to be available during normal business hours to coordinate and provide status.

The contractor(s) may propose equipment or technology that utilizes the fiber ring to provide services.

4.3.4.2. DGS Outside Plant Copper Facilities

DGS/TD owns conduit structures and copper cabling in Los Angeles, San Francisco, and Sacramento as described in Section 3. The structure in Sacramento is extensive and used for services other than just telephone access. DGS/TD also uses a part of the heating and cooling tunnels in Sacramento to distribute telephone and data facilities.

The State expects the contractor(s) to operate and maintain these conduit structures and the telephone cabling contained within. The contractor(s) is/are expected to track and mark these facilities in response to requests from Underground Service Alert (USA). The contractor(s) is/are also expected to track and mark any telecommunications facilities that carry traffic derived from the contract (inter-building conduit).

The contractor(s) should recognize the need of existing State users for access to the conduit/manhole facilities, and be prepared to accommodate the requests. Examples of such requirements include video service, alarm services, LAN services, and environmental control circuits.

The existing conduit structure and cabling will be made available for use by the contractor(s). If the conduit structure or cabling needs to be augmented for a specific serving area, building or service, the contractor(s) will do so at their expense, and the structure or cabling will become the property of the State at the termination of applicable contract.

If and when required, the cable plant should be made compliant with current State and National Fire and Electrical codes at the expense of the contractor(s). The existing state-owned cables will be maintained and administered by the contractor(s) as the State's business partner. These cables will be added to the inventory database.

4.3.4.3. Lease Back of State Property

Some solutions may require the use of the copper facilities installed at 1115 P St., 630 Sequoia Pacific Blvd, and 2415 1st Ave, Sacramento located on State property. To use these facilities, the contractor(s) must negotiate with DGS to lease the space at a fair market rate.

4.4. Customer Premise Equipment and Support Services

The State expects, at a minimum, the current level of service compatibility and product availability for customer premise equipment. In addition, the State anticipates additional services and equipment as need and technology advancement dictates.

The DGS/TD recognizes that some customers use proprietary equipment for Centrex-type services and data WAN applications. Customers with proprietary equipment will have to be accommodated in this new environment at no additional cost. The successful contractor should either make the existing equipment function in the new environment or replace it with equipment of similar quality that will function the same as, or better than, the existing equipment.

The DGS/TD and the affected customers will be the approving authority for replacing the equipment. This includes any necessary equipment, building modifications, wiring, and training for user staff.

4.5. End User Support

This section outlines the planned support function of the contractor and DGS/TD for activities related to State agency acquisition of telecommunications services as defined in this RFI.

4.5.1. General

The DGS/TD will continue to oversee the use of the contract by customers, and is expected to delegate authority to agencies to submit requests for certain services directly to the contractor(s).

The DGS/TD may also designate some services as non-delegated and require DGS/TD review and approval prior to agency acquisition. The DGS/TD will use contractor provided management reports and periodic random agency audits to monitor and administer contract usage for delegated services.

4.5.1.1.DGS/TD Activities

The DGS/TD has broad authority and oversight for State telecommunications, and considers the best interests of the State as a whole when making decisions and determining its strategies. This includes focus on those policies and activities that emphasize the State's core competencies, "economy of scale" impacts, and other related concerns as outlined in the CALNET Vision in Section 4. These activities and knowledge include but are not limited to:

- Expertise and influence of State technology/regulatory directions, laws, and policies. Knowledge of other related

factors such as industry-wide market trends and best practices. This expertise helps the DGS/TD advise customer agencies in their strategic telecommunications planning needs.

- Strong focus on customer business needs and knowledge of State agency operational requirements in order to help plan for appropriate telecommunications services. This includes consulting with agency staff to support and guide in the acquisition and implementation of telecommunications goods and services.
- A strong customer advocate role to ensure that contracted telecommunications providers continuously provide responsive, appropriate service to customer agencies, which includes ongoing monitoring of contractor(s) performance and customer satisfaction.
- Continuous review and where possible, renegotiation of contract pricing based on periodic monitoring of industry pricing strategies and related factors.
- Assess operational requirements of State agencies to help eliminate operational telecommunications related redundancies and duplication of effort between State agencies.
- Contract management oversight to monitor effectiveness, and to audit contractor adherence to State telecommunications contract requirements.
- Knowledge of telecommunications law, technology, and market trends in anticipation of subsequent contract development and procurement awards.
- Provide administrative management for contract(s), policies, directives, standards, and augmentation of new services.
- Make decisions on agency requests for approval for exemptions to existing contracts.
- Perform as customer agency advocate to ensure the contractor(s) provides effective response to agency requests as stipulated in the contract.
- Respond to service issues beyond the scope of the contract(s).
- Perform periodic audits of State and local governmental agency bills to ensure accuracy based on the terms and conditions of the contract(s) and to ensure cost effectiveness of service selection for agency application.

4.5.1.2. Contractor Activities

As associated with the services to be provided, the State expects contractor(s) at a minimum to:

- Provide staff to perform as the principal business and technical resource for information on pricing, features, and feature interactions/restrictions. This staff should be available on demand by telephone and to participate in meetings to answer questions about contracted services.
- Provide documentation/reports as requested on pricing, features, feature interactions/restrictions and other information related to management of the contract (as noted below or in the upcoming RFP).
- Use the State database of agency designated Agency Telecommunications Representatives (ATRs) to determine their fiscal authority to order service.

4.5.2. Planning

4.5.2.1. DGS/TD Activities

As associated with the services to be provided, the DGS/TD expects to:

- Respond to planning issues beyond the scope of the contract.
- Review and approve non-delegated service project plans developed by the contractor(s).

4.5.2.2. Contractor Activities

As associated with the services to be provided, the State expects the contractor(s) at a minimum to:

- Perform overall planning coordination activities related to service implementation.
- Provide end-user station reviews to optimize the structure and implementation planning detail for selected contract services.
- Provide, and update as necessary, a project plan detailing all resources (cost, staff, etc.), scope (tasks), and scheduling (with constraints) necessary to implement service.
- Provide information to the agency regarding proprietary equipment that interfaces with enhanced services and must be purchased separately.

4.5.3. Design

4.5.3.1. DGS/TD Activities

As associated with the defined contracted services, DGS/TD expects to:

- Respond to design issues beyond the scope of the contract.
- Review and approve non-delegated service project design documentation developed by the contractor(s).

4.5.3.2. Contractor Activities

As associated with the defined contracted services, the State expects the contractor(s) at a minimum to:

- Collect data and conduct end user station reviews and complete associated service request documents.
- Provide design recommendations and critical feature interactions with documentation to the agency for review.
- Analyze agency service requests and determine facility requirements.
- Determine network interconnection requirements of service requests.
- Determine the required functions to perform transmission, distribution, and switching applications.
- Determine required network management applications and interface requirements.

4.5.4. Provisioning and Implementation

Customers may place service orders through electronic means, or by direct provisioning of line, trunk, or similar services. The State would expect that with the exception of customer premise wiring plant and equipment installation work, direct customer provisioning would be near instantaneous. Customer posted electronic service orders should be processed on a less than one-day cycle, unless customer premise wiring plant or equipment installation work is involved.

4.5.4.1. DGS/TD Activities

As associated with the defined contracted services, the DGS/TD expects to:

- Respond to issues beyond the scope of the contract(s), and other related issues as situations dictate.

- Monitor ongoing facility provisioning and implementation, and prepare management forecast planning evaluations and reports.
- Review and approve non-delegated services project provisioning and implementation documentation developed by the contractor(s).

4.5.4.2. Contractor Activities

As associated with the defined contracted services, the State expects the contractor(s) to:

- Provide the State with a means to initiate near real time provisioning of service if requested. For this RFI, near real time would expect to allow for delays in transmitting and processing of the request, but the request should not be held for future processing.
- Perform all activities associated with the receipt, logging, task identification, scheduling, and completion notification of agency service requests.
- Perform these service order/completion functions via relational database programs.
- Develop and enter data, and maintain an inventory of agency services and line assignments within the proposed relational database programs.
- Provide an electronic means of receiving valid service orders from authorized end-users
- Provide a means to validate that the end user is authorized to initiate a service request based on the current ATR master file.
- Provide a positive acknowledgment of receipt of a valid end-user service request.
- Provide status information to end-users on the progress of service requests initiated by the user.
- Provide DGS/TD with service implementation management reports that include, at a minimum a listing of requests and the implementation interval for each request.
- Define the necessary interface requirements for existing end-user CPE to connect to the contractor-provided services.
- Perform a site inspection of user location prior to implementation of service to ensure there is an adequate environment for the new service.

- Coordinate the service installation with the identified end-user contact. This includes scheduling, hosting, coordinating, and documenting minutes of coordination meetings as appropriate.
- Establish and publish standard service implementation intervals for end-user planning.
- Develop engineering design standards for contractor use of existing State assets where applicable.
- Develop comprehensive implementation plans and schedules that minimize disruption of the current end-user's telecommunications system.
- Prepare site preparation plans that specify requirements for space, power, air conditioning, humidity control, floor loading, dimensions, equipment, and any other special requirements necessary for the provision of service in an end-user location.
- Prepare service acceptance plans that specify requirements for functional testing, load testing, and cut over testing of contractor provided services.
- Prepare or obtain floor plans showing jack locations and jack numbers (if available) and identify the "Primary Directory Number" next to the appropriate jack location on the floor plans).
- Provide DGS/TD staff access to the proposed relational database programs for service activity monitoring and development of agency profiles.

4.6. Marketing Services

The State expects the contractor(s) to employ industry accepted marketing practices to inform agencies of the availability and benefits of contracted services. The contractor(s) are expected to submit for approval, marketing plans that will include as a minimum the following provisions:

- Contract-marketing activities will be limited to currently approved contracted services.
- The contractor(s) may discuss technology applications or solutions with customers, but may not present or discuss existing or proposed products or services until those services are contractually available.
- Adherence to guidelines established by the State with the contractor's input for marketing activities.
- Ensuring marketing brochures and materials for contracted services are approved by the State prior to distribution.

- Joint State/contractor training and State certification that ensures marketing representatives have been trained on contract services.
- Monthly customer profiles which include Agency identification, customer (end user) service locations, service types (by service identifier number) quantity per service type/minutes as applicable, and circuit/phone numbers.
- Monthly reports on contract usage for State and local government.
- Proposing and assessing new services.
- Validating proposed service-pricing models are competitive with industry pricing.
- Establishing a joint forum for contractor(s) and DGS/TD market planning to enhance contract use.

4.7. Training

4.7.1. User Training

The State anticipates customer training as part of the service order and standard service provisioning process. This training should be offered at the customer premises, or optionally the customer may choose to utilize off-site training, audio-visual training packets, personal computer based training, or other arranged opportunities.

The state expects that customers may also request training that will enable their own on-site user training programs, or train staff for administration of ACD, MIS, Voice Mail, or other similar enhanced services.

4.7.2. General Telecommunications Training

It is expected that training for customers to maintain skills in general telecommunications technical and related business matters will need to be provided. The State may offer facilities for the contractor to demonstrate new products or services to DGS/TD and potential users.

4.7.3. DGS/TD Staff Training

The State expects training for DGS/TD staff to perform and maintain skills in general telecommunications technical and related business matters. This includes the products and services offered under the contract, and tools for monitoring contractor performance.

4.8. Network Operations, Maintenance and Management

4.8.1. General

The State expects service provisioning, network operation, maintenance, and client billing for all services without direct State staff involvement.

The DGS/TD role in the processes is expected to be one of contract management and oversight, and as a strong customer advocate in overseeing the outcomes and results.

4.8.2. *Client Representation*

DGS/TD is expected to actively represent agencies in resolving significant issues regarding business transactions and service performance.

4.8.3. *Information Access*

The State expects oversight and management information access designed to allow DGS/TD to meet its responsibilities, including the ability to independently validate contractor-provided service performance and fiscal management information. The information access is expected to include both historic electronic data and near real time services status.

4.9. Invoicing Services

4.9.1. *Invoicing System for Voice & Data Services*

DGS/TD expects a system that produces invoices that are accurate and easy to verify by customers in a timely manner. The State expects processes and procedures to be in place to avoid order entry error on adds, changes or deletes, to produce an invoice that is accurate (service type, quantities, dates of service, contract rates, etc.), and descriptive (itemized charges, meaningful description of charges, and cross reference data such as port and circuit invoices, etc.). The State expects contractors to render individual bills directly to any agency authorized to use the contract.

4.9.1.1. Billing System Options

The State expects the billing system to include, at a minimum, the following options to be provided by the contractor(s):

- Delivery of invoice to customer no later than 10 business days after the end of the customer's billing cycle.
- Availability of both consolidated and individual invoices, arranged by divisions, offices, accounting centers, nodes, or circuits within the department.
- Flexible billing cycles.
- Customer Service Record.
- Itemized charges for a service connection provided in one section of the bill.

- Reference to the State's service request (STD.20) number or the local government's purchase order number (PON) for related order activity.
- Meaningful description of charges.
- Ability to charge for a previous month(s) and provide the dates of service.
- Call Usage detail.
- Explanations of all codes and line items.
- Summary reports.
- Itemized list of monthly recurring service charges and non-recurring charges.
- Ability to accommodate new services invoicing in a timely manner.
- Ability to accommodate SLA rebates with a clear description (i.e., type of rebate, ticket #, circuit number, and dates).
- Automated refund issuance when a service discontinuation occurs and there is a remaining credit balance. Contractor(s) are expected to initiate refunds without a customer request to do so.
- Automatic internal bill back.
- Availability of invoices in electronic form (on CD-ROM at no cost to the customer and/or web based posting).
- Option for multiple copies of invoices and supporting detail.
- Software program for billing data analysis and management reporting.
- Invoice remittance page that includes previous charges (amount of last bill, payments or credits & adjustments and unpaid balance), current charges (reflects all sections of an invoice including the credits and adjustments for that bill round) and Total Due.
- Capability for the DGS/TD to run management reports from the invoicing system (i.e. primarily inventory, rebates, and invoicing).
- Provide customers with the option to receive monthly billing for contracted services and to pay contractor invoices via electronic transmission following the American National Standards Institute (ANSI) ASCX 12 standard format for telecommunications invoicing.

- Provide customers the option to choose their invoice media type, and be free of charge. If a customer chooses either the CD or web based posting options, the contractor(s) is/are expected to issue a paper remittance slip so agencies may submit it to the State Controllers Office along with their payment.

4.9.1.2. Billing Adjustments

Back billing is expected to be limited to four months within a fiscal year, and no more than two months into a previous fiscal year for all services, including contract conversion projects.

It is expected that if an accurate bill cannot be provided within four months of the current fiscal year, or two months back into the previous fiscal year, agencies will not be held accountable for paying for those services.

Customers may dispute inaccurate invoices through the State's formal dispute process. Contractor(s) is/are expected to apply any applicable credits owed to agencies back to the beginning of the contract. In addition, the State expects the contractor(s) to:

- Provide a toll free number for contracted services billing related questions and/or adjustments. Contractor staff responding to this toll free number should be fully familiar with the contracted service rates and applicable terms and conditions of the contract to effectively respond to customer billing inquiries.
- Not assess late payment charges for contracted services less than 90 days in arrears.
- Not assess late payment charges for agencies disputing invoices due to contractor error.

4.9.1.3. Reports

The State expects monthly detailed reports identifying all services implemented under the contract for an individual agency/customer. These reports are expected to contain the name of the agency/customer, service address, inventory/quantities, service period, type of service, total recurring charges and non-recurring charges, and service level agreement rebates (if applicable), applicable administrative fee rate, and total administrative fee collected.

The identified management reports should be delivered to DGS/TD by electronic means.

4.9.1.4. Administrative Fee Collection

The contractor(s) is/are expected to, on behalf of DGS/TD, bill and collect a contract administrative fee as determined by DGS/TD for specified contracted services. This fee should be included within the amount charged to those agencies obtaining service pursuant to the contract. The contractor(s) is/are expected to remit a payment based on the revenue collected for this administrative fee to DGS/TD on a monthly basis at no additional charge. The contractor(s) should provide reports on administrative fees as defined elsewhere in Section 4.

4.9.1.5. Invoice Audits

The contractor(s) is/are expected to provide audits upon request of DGS/TD at the contractor(s)'s expense.

DGS/TD should be provided copies of any customer agency's billing records for contract rate compliance audit purposes.

Audit criteria is expected to include, but not be limited to the following:

- Major Issue – The audit is expected to require the contractor(s) to review customer agency service/purchase orders from initial invoice through current invoice, validating all credits and debits have been accurately applied.
- The contractor(s) is/are expected to provide a detailed report of audit findings to DGS/TD and any agency that is the subject of the audit.
- Minor Issue – The contractor(s) is/are expected to perform periodic checks to verify customer agencies are billed accurately (i.e., contract rates, zones, charged for services only quoted in the contract, taxes and surcharges, etc).

4.9.1.6. Invoice Oversight

The DGS/TD expects to exercise contract oversight and management to ensure that the contractor is accurately invoicing agencies according to the terms and conditions of the future contract. Oversight and management is expected to include, but not be limited to the following:

- Invoice management tools provided by the contractor(s) to monitor invoices for accuracy (i.e., correct order entry such as adds, changes, and/or deletes; and correct rates, dates of service, quantities, etc.).
- Monitor the accuracy of the SLA rebates.

- Reconcile anticipated administrative fee revenues with contractor monthly payments.
- Perform cost recovery analysis and adjust administrative fee rate(s) as necessary.
- Perform periodic audits of agency invoices and service requests to verify accuracy of applied charges for service offerings.

4.9.1.7. Other

The State expects the contractor(s) to generate accurate agency bills based on custom contracted rates, including administrative fees, and produce the required management reports.

The State will not be subject to monthly minimum usage charges for any contracted service, unless specifically approved by DGS/TD.

At a minimum, the DGS/TD expects all usage based services be billed in six second increments or less with no more than an 18 second initial period.

The State expects fraud detection, prompt client notification, and corrective action programs to reduce the State's vulnerability to fraudulent activities. The contractor(s) would also be expected to offer a program to assist agencies with identifying suspect calling patterns that may constitute abuse or improper use of State telecommunications services.

4.9.2. *Service Level Agreements for the Invoicing System for Voice & Data Services*

Service Level Agreements (SLA) are expected to be required for the invoicing system (see State Management and Oversight). The contractor(s) is/are expected to be accountable for customer invoices that contain errors. The State expects SLA rebates to be applied to the following:

- Order entry error for add, changes and/or deletes.
- Incorrect rates.
- Failure to provide a corrected invoice within 30 (calendar) days following resolution of a dispute.
- Failure to apply credits to an invoice within 60 (calendar) days following resolution of a dispute.
- Recurring billing errors.
- Inapplicable description of service charges.

- Failure to provide a service request number (STD.20) for the State agencies or purchase order number (PON) for local government agencies.
- Failure to meet invoice delivery dates.
- Invoice system errors.
- Failure to provide a refund within 60 (calendar) days of account closure.

4.10. State Management and Oversight

4.10.1. General

The State expects regular and comprehensive management reports, including reports on traffic patterns, circuit utilization, fault detection and diagnosis, maintenance, real-time circuit utilization display, trouble ticket tracking, and historical and trend reports. The State expects the contractor(s) to compile network and circuit utilization data to appropriately plan and recommend changes in the bandwidth requirements and network design.

The State expects the contractor(s) to accommodate the variance in agency requirements for network management involvement. This includes the agencies and major data centers that require the ability to perform dynamic load balancing, router configuration and management, and trouble-shooting, to the agencies that are more flexible, primarily reserving for themselves final approval authority on network design, planning, and modification.

4.10.2. Contractor Provisioning Performance

The State expects provisioning performance of the contractor(s) to be measured based on, but not limited to, the following minimums.

4.10.2.1. Voice Services

- Routine orders submitted for contractor processing that involve less than 48 lines or 24 business sets, and not involving site work, should be completed by the end of the next business day. This includes ISDN and Switched 56 Kbps services.
- Routine new 800/888 service orders submitted for contractor processing should be completed by the end of the next business day.
- Routine Calling Card orders submitted for contractor processing should be completed and resultant cards shipped within 5 business days.

- User on-line provisioning, where available and exclusive of site work, should be implemented within 1 hour of posted changes and additions.

4.10.2.2. Site Work

- Routine orders submitted for contractor action involving 48 Lines or less should be completed within 3 business days or when requested by the agency, whichever is later. This activity should run concurrent with the service provisioning activity.
- Orders for expedited contractor action involving 48 lines or less should be completed within 2 days, including holidays and weekends.

4.10.2.3. Voice Service Project Work

- All voice service provisioning for site cable additions, enhanced services (ACD, etc.), CPE installations, or exceeds the above-defined scope and detail should be handled as projects. The contractor is expected to respond to the customer's project level service request within 3 working days. This response should include either a schedule for the actions or an appointment within 5 working days to plan the project detail.

4.10.2.4. Private Line Service

The required private line services provisioning response times from receipt of order.

- DS0/T1 private line services to MPOE demarc should be completed within 10 working days or the agency requested date, whichever is later. Services ordered with authorized expedite charges should be completed within the negotiated time frames, not to exceed 5 working days.

4.10.2.5. Private Line Service Project Work

- All private line services provisioning that includes site cable additions, enhanced services, CPE installations, or exceeds the above defined scope and detail should be handled as projects. The contractor is expected to make an initial response to a project level service request within 3 working days. This response is expected to either result in a quoted schedule for the actions, or to offer an appointment within 5 working days for planning the project detail.

4.10.3. Contracted Service Performance

4.10.3.1. Voice Services

- Call completion percentage 99.9999%
Call completion percentage should depict the successful completion of attempted switch transactions.
- Grade of Service P.03
Grade of service should depict the non-busy destination station call completion.
- Dial Tone availability 99.9999%
Dial tone availability should depict the percentage of time dial tone is available within one second of off-hook condition.
- Maximum call setup time 3 seconds
This is the time from the last digit dialed to the beginning of ringing at the destination central office.

4.10.3.2. Private Line Services

Private line data and video services should comply with existing Bellcore and other industry standards that apply to the United States. In addition, the State expects at a minimum to require:

- Percent availability 99.9998%
This represents the total time services were performing to established parameters divided by the total possible time available.
- Fast restoration time < 300ms (milliseconds)
This is the time from first detecting a service problem to the time service is restored to the established parameters.

4.10.3.3. Frame Relay Services

- The contractor(s) is expected to provide a turnkey Simple Network Management Protocol (SNMP) monitoring system. The SNMP system should be capable of partitioning to allow limited access/view of network components to individual agencies.
- The contractor(s) should provide network-rerouting options for disaster recovery.

- The proposed FRS must meet a Committed Network Availability (CNA) of 99.95%.

4.10.4. Performance Deficiencies

Performance below the defined minimum requirements are service deficiencies, and are expected to be classified as maintenance failures.

4.10.5. Contract Service Availability

The State expects continuing availability of contracted service offerings in the full range of defined features and service performance requirements. Any contractor service not available may be procured by the State through any available procurement alternative.

4.10.6. Client Advocacy

DGS/TD expects to maintain a customer advocate function involving provisioning and ongoing network service delivery. DGS/TD expects to require access to several contractor provided tools and reports to allow for monitoring of customer network trouble reports and the contractor(s) corrective action. DGS/TD's role as a customer advocate can be invoked by the escalation process, customer request, contractor request, or as a result of service and process monitoring. In support of this area, DGS/TD has enhanced communication and coordination capabilities with responsible high level contractor staff beyond the normal trouble reporting and initial order submittal processes.

4.10.6.1. Service Evaluations

DGS/TD has proactive interaction with customers to evaluate the provisioning and network performance levels they are experiencing with our contracted services. The specific topical areas discussed with customers are expected to include, but are not limited to, the following:

- Identifiable issues of quality
- Specific problems
- General levels of service
- Needs for business-enabling changes to be considered in the planning and management of contracted services
- Provisioning commitments being met

4.10.6.2. Client Problem Escalation

The State expects trouble reporting and escalation procedures for all contracted services. This includes providing central point of contact/facility, i.e. toll free number for facilitating timely

responses to agency or departmental trouble reports. The center is expected to be staffed 24 hours a day, 7 days a week and provide clients with the following options:

- Trouble-reporting for any services and/or escalation of any previously reported problems.
- Status on resolving the causes of network outages.
- Service order inquiries.

DGS/TD expects to continue to assist customers in escalating issues or concerns that are not resolved through customer contact with the contractor(s). To facilitate this function, required contractor(s)'s support is/are expected at a minimum, to include the following:

- Provide procedures and an escalation list with contact alternatives available 7x24.
- Coordinate State and contractor resources outside of processes and procedures normally available to customers.
- Provide technical analysis of significant and difficult problems of service or provisioning.

4.10.6.3. Client Service Information

DGS/TD provides customers with information regarding contracted services. This information is expected to include, but is not limited to, the following:

- Available service types, SLAs and rates.
- Guidance on proper use of service features.
- State contact referrals for services not routinely available by contract.

4.10.7. Service Level Agreements

The Service Level Agreements (SLAs) for the State are a critical “value added” service to customers who procure services during the term of the contract. The State expects the contractor(s) to meet or exceed industry standard SLAs for all services offered. Finally, the State expects SLAs to be provided for each service in the following areas:

- Provisioning management
- Performance management
- Fault management
- Account management

- Security management

4.10.8. *Fiscal Management*

The State expects to require the ability to generate agency bills based on custom contracted rates including administrative fees, and to produce the required fiscal management reports.

The State expects to exercise contract oversight and management to ensure the contractor(s) is/are providing contracted services to agencies according to the terms and conditions of the applicable contract(s) as well as to validate projected cost/benefit to the State.

This oversight and management is expected to include, but not be limited to the following:

- Monitoring agency use of the contract and adherence to established policies/directives.
- Reconciling anticipated administrative fee revenues with contractor monthly checks.
- Performing cost recovery analysis and adjusting administrative fee rates as necessary.
- Performing periodic audit of agency invoices and service requests to verify accuracy of applied charges and effective use and application of service offerings to maximize cost effectiveness.
- Monitoring total inventory and revenues on a monthly and/or semi-monthly basis for all services offered under the contract(s).

4.10.8.1. Fiscal Management Reports/Tools

The State expects to require access to the billing data of all customers using contracted services. This includes State and local government agencies and all other approved entities using contracted services. The State expects access to all contract services billing data record detail from the highest customer level to the lowest data level.

The data is expected to be available in an electronic format suitable for the State to perform detailed billing audits of customer invoices as well as create custom report summaries or detailed reports by all data fields and data types. For example, the data should contain service component ID or items identified on a per rate basis, a call, a piece of equipment, etc.

The State expects to require management tools and standardized reports to be provided by electronic means. At a minimum, the State expects the following reports to be provided.

4.10.8.1.1. Summary/Detail Reports by Products/Services

The State expects a monthly fiscal summary and detailed reports identifying products/services provided under the contract(s). The summary report is expected to provide the service period, identification of service type, quantities, total calls, total minutes, total recurring charges (i.e., including any ongoing charges/credits that are billed separately from the recurring charge section), non-recurring charges (i.e., including any one-time charges/credits billed separately from the non-recurring charges section), total usage charges, total taxes/surcharges, total credits and adjustments, administrative fee rate charges, total administrative fees collected, and total charges.

The Summary of Services Billed Report is expected to be arranged by customer bill group (i.e., executive, local government, exempt, city, higher education, etc.) The detailed report identifying products/services is expected to provide similar information that the summary report provides and includes the feature type and service component ID. The contractor(s) is expected to provide billing data to create custom reports.

4.10.8.1.2. Summary/Detail Reports by Agency/Customer

The State expects a monthly fiscal summary and detailed reports identifying all products/services provided under the contract(s) for each customer agency. The summary report is expected to provide the customer bill group, agency name, agency ID, billing number, billing number name, service period, identification of service type, quantities, total calls, total minutes, total recurring charges (i.e., including any ongoing charges/credits billed separately from the recurring charges section), total non-recurring charges (i.e., including any one-time charges/credits billed separately from the non-recurring charges section), total usage charges, total taxes/surcharges, total credits and adjustments, administrative fee rate charges, total administrative fees collected, and total charges.

The Summary of Services By Agency Report is expected to reflect totals at the highest customer bill group and to include subtotals by designated customer bill groups and sub-groups detailed by billing number. The detailed report identifying agencies is expected to provide information similar to the summary report, including the feature type

and service component ID. The contractor(s) is/are expected to provide billing data to create custom reports.

4.10.8.1.3. Monthly/Semi-monthly Inventory Report

The State expects monthly and/or semi-monthly inventory reports identifying all products/services implemented under the contract. The reports are expected to provide the service period, date, identification of service type, feature type, identification code of service component, current quantity, minutes, tariff rate if applicable, contract rate, administrative fee rate, customer rate (contract rate with administrative fee), administrative fee revenues, total revenues identified by agency and/or State and local designation.

4.10.8.1.4. DGS/TD Fiscal Audits

The DGS/TD may audit any customer invoice. DGS/TD may request the contractor to supply a copy of any customer bill and supporting detail in electronic format without prior authorization.

4.10.9. Management Tools and Reports

The State expects to require the tools and reports necessary to oversee the contract. The State expects the contractor(s) to provide detailed reports and network management tools that allow the State to thoroughly oversee network performance and SLA compliance that include, but are not limited to:

- Traffic patterns
- Circuit utilization
- Fault detection and diagnosis
- Maintenance on all voice or data circuits
- Provisioning
- Real-time network monitoring display
- Real-time trouble ticket tracking
- Network trending
- Order tracking
- SLA rebates
- Quarterly inventory reporting (to include end user address)
- Fiscal reporting (see section above)

DGS/TD expects to require detailed management information be available upon request. The State expects all network management tools and reports to be accessible from its locations at 601 or 630 Sequoia Pacific Blvd., Sacramento. This capability is expected to be by stand alone terminal or web based solution. The State expects to require the contractor(s) to acquire, install, support, and maintain all the electronic hardware and software used to support the network tools and reports.

The State expects the contractor(s) to provide transport, equipment and software needed to allow access to management tools and reports unless otherwise agreed to by the DGS/TD. If the contractor(s) fails to provide the network tools and/or reports as agreed, penalties are expected to apply.

4.10.10. Cost Reduction Plan

DGS/TD recognizes that the information technology marketplace is a very competitive environment where rates for services have declined, features continue to expand, and new services constantly become available. The contractor(s) is expected to participate with DGS/TD in an Annual Service Review of market rates, service, and features to ensure the State is receiving the most cost competitive and efficient services available.

Rate reductions may be implemented throughout the term of the contract and through contract amendment(s). The State expects the contractor(s)'s performance to be measured and evaluated, in part, on the ability to deliver a cost competitive service throughout the term of the contract(s).

4.11. Implementation/Conversion Strategy

The State currently expects to require the development of implementation/conversion strategies to assure that all services will be transitioned to the eventual awarded contractor(s) in a timely manner, at no additional cost to State or local government agencies. This process is expected to remain transparent to the customer and to include the maintenance of existing user telephone numbers.

The State expects the awarded contractor(s) to develop transition strategies to migrate customers from the incumbent (current) contractor to their services at the beginning of the awarded contract(s) and at the end of prior term commitments. Also expected, are development of migration strategies from each awarded contractor's service to another awarded contractor's service during the term of the awarded contract(s), and at their conclusion.

Each plan is expected to use industry accepted project management methodology and to include specific timeframes for the conversion by customer, location, and service type, and to identify tasks and requirements for coordination and cooperation with other providers.